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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,807

01/16/2004

Boo Jorgen Lars Nilsson

DSIIP001

8259

22434 7590 04/19/2007
BEYER WEAVER LLP
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EXAMINER

VU, PHU

ART UNIT

PAPER NUMBER

2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/759,807</p>	<p>Applicant(s)</p> <p align="center">NILSSON, BOO JORGEN LARS</p>	
	<p>Examiner</p> <p align="center">Phu Vu</p>	<p>Art Unit</p> <p align="center">2871</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-48, 51-67 and 70-94 is/are pending in the application.
- 4a) Of the above claim(s) 45-48, 61-63, 71, 75, 78, 82-84 and 88-90 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-44, 51-60, 64-67, 70, 72-74, 76, 77, 79-81, 85-87 and 91-94 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

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| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date <u>4/25/07</u></p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____</p> |
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DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant has argued that claims 42, 45, 50, 61-63, and 74 have been withdrawn in errors as the correspond to elected species. Claim 42 and 74 has been rejoined as it falls under species IA. Claim 50 has been cancelled by applicant. Claims 61-63 and are still considered withdrawn as they are directed to deposition by spin-coating and photolithography which is considered a separate species from the election of Group IIIB which includes deposition through a printing process.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 38-41, 43-44, 51-57-60, 64-67, 70, 72-73, and 75-76, 80 and 86 are rejected under 35 U.S.C. 102(e) as being anticipated by Duthaler 6506438.

Regarding claims 38-39, 44, 51-54, 57-60, 70, 72-73, 76, 80, 86 Duthaler teaches display comprising thin film diodes with organic semiconductors used as the

Art Unit: 2871

driving mechanism in the backplane of a liquid crystal display. Duthaler teaches a method of making the two-terminal switching device/diode comprises forming a first electrode of the switching device (fig. 2 element 52) depositing an organic semiconductor (54, 56, 58 see column 5 lines 15-25) from solution over at least a portion of the first electrode, wherein said depositing comprises forming a patterned layer of the semiconductor (ink-jet printed see column 5 lines 25-30) forming a second electrode (58) over at least a portion of the semiconductor overlying at least a portion of the first electrode. Regarding claim 58, Duthaler also teaches an organic conductor of polyaniline through ink-jet (see column 5 lines 25-30).

Regarding claims 40-41, 43, 72-73 and 75, Duthaler teaches a semiconductor consisting of a polymer of thiophenes including poly(3-hexyl-thiophene) (see column 4 lines 13-31).

Regarding claims 55-56 and 64-66, Duthaler also teaches an organic conductor of polyaniline deposited from solution by an ink-jet printing method (see column 3 lines 58-66) and depositing a semiconductor comprises forming a patterned layer of the semiconductor through ink-jet printing (see column 5 lines 25-30).

Regarding claim 67, the reference teaches a PET substrate, which has a melting point of less than 350 degrees (see column 3 lines 44-55).

Regarding claim 70, the reference teaches the pixel control substrate is for an electrophoretic display (see column 13 lines 15-20)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 42, 77, 79, 81, 85, 87, and 91-94 rejected under 35 U.S.C. 103(a) as being unpatentable over Duthaler in view of Yu 6706060.

Regarding claims 42, 74, 77, 79, 81, 85, 87 and 91-94, Duthaler teaches all the limitations of the claims except, a semi-conductor material of MEH-PPV in a diode with rectification ratio of 10^5 and a asymmetric voltage curve. Yu teaches a microswitch array (active matrix) formed by MEH-PPV semiconductor diodes, with asymmetric voltage curves (see fig. 5A and 5B) and rectification ratios of 10^5 which is between 10^3 and 10^9 that enable high pixel density (see column 2 lines 50-52). Therefore, it would have been obvious to one of ordinary skill in the art to apply, a semi-conductor material of MEH-PPV in a diode with rectification ratio of 10^5 and a asymmetric voltage curve to attain higher pixel density.

Conclusion

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2871

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu Vu whose telephone number is (571)-272-1562.

The examiner can normally be reached on 8AM-5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu Vu
Examiner
AU 2871


ANDREW SCHACHTER
PATENT EXAMINER